

M2 Commands List

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Introduction

Welcome to the commands user manual of the AUDAC M2. The M2 is a Multi-Media digital Audio Mixer containing various in- and outputs. This instruction manuals describes how the functions of the M2 can be controlled using RS-232, RS-485 and TCP/IP control devices.

Input list

Direct inputs

- 1 Input 1
- 2 Input 2
- 3 Input 3
- 4 Input 4
- 5 Input 5
- 6 Input 6
- 7 Input 7
- 8 Input 8
- 9 Input 9 *Can be switched between input A, B, C & D using the 'SLINE' Command*

Priority & test inputs

- 12 Prio 1
- 13 Prio 2
- 14 Internal sine generator
- 15 Internal white noise generator
- 16 Internal pink noise generator

Wall panel inputs

- 17 WP1 input (digital interface RS485_1)
- 18 WP2 input (digital interface RS485_2)
- 19 WP3 input (digital interface RS485_3)
- 20 WP4 input (digital interface RS485_4)
- 21 WP5 input (digital interface RS485_5)
- 22 WP6 input (digital interface RS485_6)
- 23 WP7 input (digital interface RS485_7)
- 24 WP8 input (digital interface RS485_8)

Fiber inputs

- 25 FB1 input
- 26 FB2 input
- 27 FB3 input
- 28 FB4 input
- 29 FB5 input
- 30 FB6 input
- 31 FB7 input
- 32 FB8 input

Scenes

When a scene is selected, the configured scene for the selected output will be triggered. The scene configurations can be different for every output.

- 51 Scene 1
- 52 Scene 2
- 53 Scene 3
- 54 Scene 4
- 55 Scene 5
- 56 Scene 6
- 57 Scene 7
- 58 Scene 8

Global scenes

When a global scene is selected, the output settings will be made for all outputs simultaneously as configured in the global scene, no matter for which output the global scene is triggered.

- 61 Global scene 1
- 62 Global scene 2
- 63 Global scene 3
- 64 Global scene 4
- 65 Global scene 5
- 66 Global scene 6
- 67 Global scene 7
- 68 Global scene 8

Output list

Direct outputs

- 1 Output 1
- 2 Output 2
- 3 Output 3
- 4 Output 4
- 5 Output 5
- 6 Output 6
- 7 Output 7
- 8 Output 8

Wall panel outputs

- 12 WP1 output (digital interface RS485_1)
- 13 WP2 output (digital interface RS485_2)
- 14 WP3 output (digital interface RS485_3)
- 15 WP4 output (digital interface RS485_4)
- 16 WP5 output (digital interface RS485_5)
- 17 WP6 output (digital interface RS485_6)
- 18 WP7 output (digital interface RS485_7)
- 19 WP8 output (digital interface RS485_8)

Fiber outputs

- 20 FB1 output
- 21 FB2 output
- 22 FB3 output
- 23 FB4 output
- 24 FB5 output
- 25 FB6 output
- 26 FB7 output
- 27 FB8 output

Using the commands

The M2 has various control ports which are all accepting the same commands.

- RS-232 port
- All RS-485 ports (Peripheral inputs 1 to 10)
- TCP/IP

The RS-232 / RS-485 ports must be configured as following:

- 19200 baud
- 8 data bits
- 1 stop bit
- No parity

The TCP/IP port accepts the commands at port 5001.

All TCP/IP answers returned by the M2 are followed with 0x00.

Command overview

Startsymbol|destination|source|command|argument's|checksum|stopsymbol

Example: Set volume M001 zone 1 to -30dB

ASCII #|M001|F001|SV1|30|55b8|return

HEX 237c523030317c463030317c5356317c33307c353562387c0d0a

Important:

– Return = 0x0d 0x0a

The ‘return’ at the end of a command is always a carriage return followed by a line feed. In hexadecimal representation this is ‘0x0D 0x0A’ (0x0d is carriage return, 0x0A is line feed). When sending the commands in ASCII, this should be sent as a <CR> <LF>.

– The checksum is CRC-16 excluding the ‘#’. You can replace the checksum with ‘U’, this is always accepted as checksum.

To avoid any problems due to communication failure between the controlling device and the receiving device, it is always recommended to calculate the checksum instead of sending the ‘U’ character. The calculation of the checksum can be done using software tools which are available on the audac website.

Command flow

- 1) The client sends a command to the M2
- 2) The M2 acknowledges the command by returning the same command an a ‘+’ as Argument, if ‘L’ is received then this command can’t get executed because the load > 90%
- 3) The M2 updates all client's with the new information

All zone settings will be lost if the device is switched off. To keep the changes you must save them with the “SAVE” command.

Commands list

SVxx

Set volume for an output to a certain level

Command: SVxx, where xx is the output number

Arguments: Volume in neg dB → 0 is maximum volume / 100 is minimum volume

Example: Set volume in output 2 to -40dB

Command #IM001|F001|SV02|40|4b69|return

Answer #|F001|IM001|SV02|+|4503|return

Update #|ALL|IM001|V02|040|6734|return

SVUxx

Set volume up with 3dB for an output

Command: SVUxx, where xx is the output number

Arguments: 0 (none)

Example: Current volume for output 5 is -40dB, set volume up with 3dB

Command #IM001|F001|SVU05|0|348f|return

Answer #|F001|IM001|SVU05|+|69ed|return

Update #|ALL|IM001|V05|037|2186|return

SVDXX

Set volume down with 3dB for an output

Command: SVDXx, where xx is the output number

Arguments: 0 (none)

Example: Current volume for output 5 is -40dB, set volume down with 3dB

Command #IM001|F001|SVD05|0|758c|return

Answer #|F001|IM001|SVD05|+|28ee|return

Update #|ALL|IM001|V05|043|2035|return

SVALL

Set volume for all outputs to a level (level can be different for all outputs)

Command: SVALL

Arguments: XX^XX^XX^XX^XX^XX^XX^XX where XX are the volumes

Example: Set volumes for the outputs as following: output 1= -10 dB, output 2= -12 dB, output 3= -20 dB, output 4 = -19 dB, output 5 = -15 dB, output 6 = -7 dB, output 7 = -70 dB, output 8 = -0 dB

Command #IM001|F001|SVALL|10^12^20^19^15^7^70^0|le7d6|return

Answer #|F001|IM001|SVALL|+|leba6|return

Update #|ALL|IM001|VALL|010^012^020^019^015^007^070^000|81f7|return

GVXX

Get volume in a zone

Command: GVXX, where XX is the zone number
Arguments: 0 (none)

Example: Get volume in zone 3

Command `#IM001|F001|GV3|0|29fb|return`
Answer `#|F001|M001|V03|025|235a|return`
Update none, nothing changed

GVALL

Get volume in all zone's

Command: GVALL
Arguments: 0 (none)

Example: Get all volume's

Command `#IM001|F001|GVALL|0|49c4|return`
Answer `#|F001|M001|0|010^012^020^019^015^007^150^000|0|7d5f|return`
Update none, nothing changed

SRXX

Set routing in a zone from a input

Command: SRXX, where XX is the zone number
Arguments: input

Example: Set input 3 to zone 2

Command `#IM001|F001|SR2|3|f108|return`
Answer `#|F001|M001|SR2|+|e260|return`
Update `#|ALL|M001|R02|000^002|69e8|return`

Important: the first argument of the update is not relevant

SRUXX

Set Routing up

Command: SRUXX, where XX is the zone number.
This command scrolls true the 8 inputs defined for that zone.
Arguments: 0 (none)

Example: Increase routing zone5

Command `#IM001|F001|SRU5|0|a4d7|return`
Answer `#|F001|M001|SRU5|+|bd4f|return`
Update `#|ALL|M001|R05|000^002|b359|return`

SRDXX

Set Routing down

Command: SRDXX, where XX is the zone number.

This command scrolls true the 8 inputs defined for that zone.

Arguments: 0 (none)

Example: Decrease routing zone5

Command #IM001/F001/SRD5/0/a72b/return

Answer #F001/M001/SRD5/+beb3/return

Update #IM001/R05/000^002/b359/return

SRALL

Set routing in all zone's from a input (input can be different for all zones)

Command: SRALL

Arguments: XX^XX^XX^XX^XX^XX^XX^XX, where XX are the inputs

Example: Set routing in zone 1 from input 2, in zone 2 from input 2, in zone 3 from input 8,

in zone 4 from input 12, in zone 5 from input 1, in zone 6 from input 15,

in zone 7 from input 8, in zone 8 from input 16

Command #IM001/F001/SRALL/2^2^8^12^1^15^8^16/0f5e/return

Answer #F001/M001/SRALL/+l2be3/return

Update #IM001/RALL/002^002^008^012^001^015^008^016/45a7/return

GRXX

Get routing from a zone

Command: GRXX, where XX is the zone number

Arguments: 0 (none)

Example: Get routing from zone 3

Command #IM001/F001/GR3/0/d142/return

Answer #F001/M001/R03/005^005/92e8/return

Update none, nothing changed

Important: the first argument of the update is not relevant

GRALL

Get routing in all zone's

Command: GRALL

Arguments: 0 (none)

Example: Get routings from all zones

Command #IM001/F001/GRALL/0/8981/return

Answer #F001/M001/002^002^008^012^001^015^008^016/e211/return

Update none, nothing changed

SBXX

Set bass in a zone

Command: SBXX

Arguments: from -9dB to +9dB

Example: Set bass in zone 5 to -3dB

Command #IM001|F001|SB5|-3|4112|return

Answer #IF001|M001|SB5|+|55a0|return

Update #IALL|M001|B05|-03|7272|return

GBXX

Get bass in a zone

Command: GBXX

Arguments: 0 (none)

Example: Get Bass from zone 5

Command #IM001|F001|GB5|0|a2cb|return

Arguments #IF001|M001|B05|-03|b6fel|return

Update none, nothing changed

STXX

Set treble in a zone

Command: STXX

Arguments: from -9dB to +9dB

Example: Set treble in zone 7 to -6dB

Command #IM001|F001|ST7|-6|276a|return

Answer #IF001|M001|ST7|+|2ee8|return

Update #IALL|M001|T07|-06|e6f1|return

GTXX

Get treble in a zone

Command: GTXX

Arguments: 0 (none)

Example: Get treble from zone 7

Command #IM001|F001|GT7|0|d983|return

Answer #IF001|M001|T07|-06|227d|return

Update none, nothing changed

STI

Set time

Command: STI

Arguments: time (hhmmss, only in 24h format)

Example: Set time to 13h45m10s

Command #IM001|F001|STI||134510|09f2|return

Answer #F001|M001|STI|+|06f0|return

Update #F001|M001|TII|134510|9001|return

Important: The built-in timeserver client synchronizes time every 10 min, if you want to set the time with this command then you have to disable the timeserver client. This can only be done through the webpage of the M2.

GTI

Get time

Command: GTI

Arguments: 0 (none)

Example: Get current time (13h45m10s)

Command #IM001|F001|GTI||0|f19b|return

Answer #F001|M001|TII|134510|9001|return

Update none, nothing changed

SDA

Set date

Command: SDA

Arguments: date (yyymmdd)

Example: Set date to 2009 march 26

Command #IM001|F001|SDA||090326|de86|return

Answer #F001|M001|SDA|+|a533|return

Update #F001|M001|DA||090326|4775|return

Important: The built-in timeserver client synchronizes the date every 10 min, if you want to set the date with this command then you have to disable the timeserver client. This can only be done through the webpage of the M2.

GDA

Get date

Command: GDA

Arguments: 0 (none)

Example: Request current date (26th of march 2009)

Command #IM001|F001|GDA||0|5258|return

Answer #F001|M001|DA||090326|4775|return

Update none, nothing changed

SMXX

Set mute state in a zone

Command: SMXX

Arguments: 0 (disable) or 1 (enable)

Example: Enable mute in zone 1

Command #IM001/F001/SM1/1/179c/return

Answer #IF001/M001/SM1/+l64f5/return

Update #IALL/M001/M01/1/3e83/return

SMALL

Set mute states in all zone's (mute can be different for all zones)

Command: SMALL

Arguments: X^X^X^X^X^X^X^X, where X is the mute state

Example: Enable mute in zone 1, disable in zone 2, disable in zone 3, disable in zone 4, disable in zone 5, enable in zone 6, disable in zone 7, disable in zone 8

Command #IM001/F001/SMALL/1^0^0^0^0^1^0^0/45f0/return

Answer #IF001/M001/SMALL/+lea0d1/return

Update #IALL/M001/MALL/1^0^0^0^0^1^0^0/d336/return

GMXX

Get mute state from a zone

Command: GMXX, where XX is the zone number

Arguments: 0 (none)

Example: Get mute from zone 1

Command #IM001/F001/GM1/0/939e/return

Answer #IF001/M001/M01/1/b091/return

Update none, nothing changed

GMALL

Get mute states from all zone's

Command: GMALL

Arguments: 0 (none)

Example: Get mute states from all zone's

Command #IM001/F001/GMALL/0/486f/return

Answer #IF001/M001/MALL/1^0^0^0^0^1^0^0/502a/return

Update none, nothing changed

GL

Get's the system load in %.

The load increases when you add generators, mixing, bass, treble the M2 will respond with 'L' in the argument of the answer instead of '+'.

Command: GL

Arguments: 0 (none)

Example: Get load

Command #IM001|F001|GL|0|411c|return

Answer #F001|M001|L|61|24ac|return

Update none, nothing changed

SSG

Set sine generator

Command: SSG

Arguments: 0 (disable) or 1 (enable), freq in Hz

Example: Enable sine generator and set to 2000Hz

Command #IM001|F001|SSG|1^2000|02de|return

Answer #F001|M001|SSG|+|2e47|return

Update #IALL|M001|SG|1^2000|c848|return

GSG

Get sine generator

Command: GSG

Arguments: 0 (none)

Example: Get sine generator (1= enable, 2000 = frequency)

Command #IM001|F001|GSG|0|d92c|return

Answer #F001|M001|SG|1^2000|9b2d|return

Update none, nothing changed

SAVE

Save's the current zone settings (routing, volume, names, bass, treble,scenes ...)

Command: SAVE

Arguments: 0 (none)

Example: Save Zone Setting for M001

Command #IM001|F001|SAVE|0|c78b|return

Answer #F001|M001|SAVE|+|de13|return

Update none, nothing changed

DEF

All zone settings and device settings will be reset to factory default. (except for the network settings)

Command: DEF

Arguments: 0 (none)

Example: Reset M001 to factory settings

Command #IM001|F001|DEF|0|d564|return

Answer #IF001|M001|DEF|+|360c|return

Update none

GSV

Get the software version of the DSP board

Command: GSV

Arguments: 0 (none)

Example: Request software version of DSP board

Command #IM001|F001|GSV|0|e529|return

Answer #IF001|M001|SV|1.0|eeb9|return

Update none, nothing changed

WOM

Who is online M types. Request a response from all 'M' type devices that are connected to each other by fibre Link.

Command: WOM

Arguments: 0 (none)

Example: Request M2's connected to the M2

Command #IM001|F001|WOM|0|53fc|return

Answer #IF001|M001|OMI|+|6eccl|return

#IF001|M025|OMI|+|7708|return

#IF001|M030|OMI|+|bb9c|return

Update none, nothing changed

WOR

Who is online R types. Request a response from all 'R' type devices that are connected to each other by fibre Link.

Command: WOR

Arguments: 0 (none)

Example: Request R2's connected to the M2

Command #IM001|F001|WOR|0|87fb|return

Answer #IF001|R025|ORI|+|063e|return

#IF001|R030|ORI|+|caaa|return

Update none, nothing changed

WOW

Connected Wall Panels. Request a response from all Wall Panel devices that are connected to the M2.

Command: WOW

Arguments: 0 (none)

Example: Request wall panels connected to the M2

Command `#IALL|F001|WOW|da3b|return`

Answer `#|F001|W001M001|OW|+|b8ac|return`

`#|F001|W002M001|OW|+|fcac|return`

Update none, nothing changed

SDI

Set Digital Input

Command: SDI

Arguments: X → 0 = COAX, 1 = TOSLINK

Example: Set digital input to toslink

Command `#|M001|F001|SDI|1|b658|return`

Answer `#|F001|M001|SDI|+|c531|return`

Update `#|F001|M001|DI|1|ff63|return`

PGRQ

Page Request command asks the M2 if a paging is possible in a specific zone and if the port the APM is connected to is free, this is priority based.

Command: PGRQ

Arguments: XXX^X^XXXXXXXX^X

XXX → priority of the paging, 001 is highest, 999 is lowest

X → 1 to 8, PI interface on back where APM is attached (defines audio source)

XXXXXXXX → each X or 4 bits , each bit or 4 zones → 00000001, zone1 used → 00000010 → zone 5 used → 00000040 → zone 7 used

X → 0 = Local, 1 = Global. Global pagings are automatically placed on fibre channel .

Example

Local page request in zone 2,3,5,7

Command `#|M001|A001|PGRQ|001^1^00000066^0|97fd|return`

Answer `#|F001|M001|PGRQ|+|88d4|return`

Important: APM paging tables can be cascaded to the same port, if another APM table on the same port is paging with a higher priority the request will be answered with NACK (-).

SLINE

Set line 9 (line 1 to 4 can be set to line 9)

Command: SLINE

Arguments: Line 1 to 4

Example: set a line to line 9 (line 1 to 4 can be set)

Command #IM001/F001/SLINE/1/f305/return

Answer #IF001/M001/SLINE/+/3e66/return

Update #IALL/M001/LINE/1/38d9/return

GLINE

Get line 9

Command: GLINE

Arguments: 0 (none)

Example: request which line has been set to line 9 (can be line 1 to 4)

Command #IM001/F001/GLINE/0/9c04/return

Answer #IF001/M001/LINE/1/35d7/return

Update none, nothing changed

SMXxx

Set mixing output

Command: SMXxx

Arguments: Line^Level(6 becomes -6dB)

Example: set line 2 of mixing output 1 to -40dB

Command #IM001/F001/SMX1/2^40/06e5/return

Answer #IF001/M001/SMX1/+/2361/return

Update #IALL/M001/MX01/02^040/5c64/return

SRON

Switch relay on

Command: SRON

Arguments: 00000000 (32 bit hex value)

Example: turn on relay 1 and 2

Command #IM001/F001/SRON/00000003/a783/return

Answer #IF001/M001/SRON/+/9b0e/return

Update #IALL/M001/SZSET/0003/8016/return

SROFF

Switch relay off

Command: SROFF

Arguments: 00000000 (32 bit hex value)

Example : turn off relay 1 and 2

Command #IM001|F001|SROFF|00000003|9cde|return

Answer #IF001|M001|SROFFI+|dc79|return

Update #IALLIM001ISZSETI0000I7016Ireturn

GMXAxx

Get output mixing

Command: GMXAxx

Arguments: 0 (none)

Example: get mixing output for output 1

Command #IM001|F001|GMXA01|0|a033|return

Answer #IF001|M001|MXA01|150^150^000^150^150^150^150^150^150

150^150|1778|return

none, nothing changed